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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/920,433	08/01/2001	Daniel P. Drogichen	5181-92400	6379

23516 7590 09/29/2005

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EXAMINER	
PAN, DANIEL H	

ART UNIT	PAPER NUMBER
2183	

DATE MAILED: 09/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/920,433	DROGICHEN ET AL.	
	Examiner	Art Unit	
	Daniel Pan	2183	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01/31/02, 08/01/01, 06/09/03*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-56* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7,10-13,16-26,28-47 and 50-55* is/are rejected.

7)☒ Claim(s) *8,9,14,15,27,48,49 and 56* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *01 August 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All * b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. Claims 1-56 are presented for examination.

2. The reissue oath/declaration filed with this application is defective because it fails to identify at least one error which is relied upon to support the reissue application. See 37 CFR 1.175(a)(1) and MPEP § 1414.

3. The reissue oath/declaration filed with this application is defective because it fails to contain a statement that all errors which are being corrected in the reissue application up to the time of filing of the oath/declaration arose without any deceptive intention on the part of the applicant. See 37 CFR 1.175 and MPEP § 1414.

4. Claims 40,50,53,63,57 are rejected under 35 U.S.C. 251 as being an improper recapture of broadened claimed subject matter surrendered in the application for the patent upon which the present reissue is based. See *Pannu v. Storz Instruments Inc.*, 258 F.3d 1366, 59 USPQ2d 1597 (Fed. Cir. 2001); *Hester Industries, Inc.* v. *Stein, Inc.*, 142 F.3d 1472, 46 USPQ2d 1641 (Fed. Cir. 1998); *In re Clement,* 131 F.3d 1464, 45 USPQ2d 1161 (Fed. Cir. 1997); *Ball Corp.* v. *United States*, 729 F.2d 1429, 1436, 221 USPQ 289, 295 (Fed. Cir. 1984). A broadening aspect is present in the reissue which was not present in the application for patent. The record of the application for the patent shows that the broadening aspect (in the reissue) relates to subject matter that applicant previously surrendered during the prosecution of the application. Accordingly, the narrow scope of the claims in the patent was not an error within the meaning of 35

U.S.C. 251, and the broader scope surrendered in the application for the patent cannot be recaptured by the filing of the present reissue application.

5. As to claims 40,57, the brodendning feature is the plurality of separate system units for performing sequences of transactions (e.g. see current claims 40, 57).

6. The omitted feature is the system being individually physically removable and replaceable within the computer (see patent claim 1) which was used to combined with a dependent claim 2 to overcome examiner's objection (see page 5 in Office action on 06/12/98, applicant's response on 09/18/98). Therefore, improper recapture exists.

7. As to claim 50 , similarly, claim 50 was the combined feature of claim 1 with objected claim 8 , now patented claim 10, in previous action (see cited actions above) , therefore, improper recapture exists.

8. As to claim 53, the broadening feature is the plurality of separate system units for performing sequences of transactions (e.g. see current claim 53), and the omitted feature o is the system being individually physically removable and replaceable within the computer (see patent claim 36 of applicant's response in 09/18/98, now patented claim 34). Applicant had argued in substance that the prior art was hardwired to all system units (see page 12 of applicant's response) while the patented claim included the system unit being individually physically removable and replaceable. Therefore, improper recapture exists.

9. As to claim 63, the broadening includes :

a) the method of partitioning a computer system having a plurality of system units into one or more independent hardware domains;

b) the clamed body without "start a configuration mode ;

The omitted feature is :

a) the global address router, global data router, a control –signal distributor, and a domain filter into the plurality of independent hardware domains under the programmable control (see patented claim 12).

10. The control-signal distributor was argued by applicant to overcome the prior art (see page 12 of applicant's response on 09/18/98), and now issued as patented claim 12. Therefore , improper recapture exists.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 1-6, 10-12, 16-20, , 23,,25, 28, 34, 35, 38,39, 40-46, 50, 53,54, 55 are rejected under 35 U.S.C. 102(b) as being anticipated by Li et al. (5,473,599).

12. As to claims 1,4, 6, 34, 35, 40, 41,42,44-46, 53,54, 55, Li disclosed a multiprocessor computer (see fig.2b) having hardware domains variable configurable by commands from an operator (see how the IP addresses programmed by the

programmer col.15, lines 30-35, see also the MAC address programmed in the ROM in col.4, lines 27-32), the computer comprising:

A) plurality of separate system units (see routers) for performing sequences of transactions, each said system unit being individually physically removable (See the router as a piece of hardware in col.4, lines 10-14, and plugged into network in col.4, lines 25-28) and replaceable within the computer, and each including at least one of:

b) processor unit for generating addresses within a predetermined global range (see the group IP address range in col.6, lines 58-62, 8, lines 57-65, col.10, lines 60-65, see also the group MAC address range in col.15, lines 36-62);

c) a memory (see IP address in non-volatile memory in col.16, lines 40-50, see also the MAC address in ROM in col.4, lines 25-32) unit for storing data at a set of addresses within said predetermined global range;

d) an input/output adapter for generating and/or receiving a set of addresses within the predetermined global range (see the multiport communication interface of a router in fig.1, col.5, lines 27-52),

e) a global address router [22] [15] [65] coupled to said system unit for transferring addresses generated in any of system units to others of system units (see fig.1, data, control, address bus [15] [65] by the controller [22], see also virtual IP router in col.4, lines 32-44, col.8, lines 8-18);

f) a global data router [130] for transferring data from any of said system units to others of the system units (see fig.1, data, control, address bus [15] [65] by the controller

[22] see also fig2b data bus [130], see also IP router in virtual IP router, in col.4, lines 32-44, col.8, lines 8-18);

g) a control-signal distributor for communicating (see CPU in col.5, lines 27-33, see also the single processor control in col.6, lines 1-8 for alternative embodiment) a plurality of control signals from any of the system units to others of said system units for affecting the operation of all of said system units in response to conditions in any system unit;

h) a domain configuration for electronically dividing said computer into a plurality of software-configurable hardware domains (see how the R1-R7 divided in groups in fig.2b, col.7, lines 30-61) each comprising an arbitrary subset of said system units (routers) independently of any physical reconnection of system units within said computer (see how the active routers could be defined into a group in col.7, lines 30-61);

i) a computer controller (see figs. 4-6) responsive to commands for specifying to the domain configuration which of said system units belong to each of the hardware domains (see how the router entered and left the group in col.8, lines 3-56) ;

j) a domain filter (see fig.7) coupled to all of said system units for electronically inhibiting at least some of said control signals originating in those of the system units within one of said domains from affecting certain of said system units outside said one domain (see the control messages only sent to certain routine in particular states) , wherein said domain filter (fig.7) is coupled to at least one of said global routers for inhibiting transactions on said one global router originating in those of said system units

within one of the domains (virgin, learn, listen, speak, standby) from being received in certain of the system units (e.g. see Coup control signals only sent to routers of the Active state, see col.14, line 1, col.15, lines 1-3, see other events) outside the one domain (virgin, learn, listen, speak, standby) .

13. As to claim 2, Li's global router was global address router (see IP router in col.8, lines 8-18).

14. As to claims 3, 5, 43, Li also included multiple paths coupled to all of system units for carrying a plurality of transactions different subsets of said system units simultaneously (see the independent processors in col.5, lines 50-59).

15. As to claim 10,50, see similar limitations already discussed in paragraph above. Li also included combining a plurality of the hardware domains (see router's IP address) into a domain cluster (see group address of groupings in fig.2b) comprising an arbitrary subset of the domains (see groups of the routers and corresponding address space) independently of any physical reconnection of the system units within said computer (see virtual IP address in col.6, lines 40-62) ;

16. As to claim 11, Li also shared the address range (see col.6, lines 45-50).

17. As to claims 12, 37, 38,39, Li also taught a method of partitioning a computer having a plurality of system units, a global address router, a global data router, a control-signal distributor, and a domain filter into a plurality of independent hardware domains under programmable control, comprising at least :

a) starting a configuration modes (see the start of entering the standby mode in fig.3, see also the start of entering the new state in figs.4,5);

(b) receiving specification data (see the messages and the priority, see e.g. fig.4 [157]) defining a subset of the system units for inclusion within one of said hardware domains (see also control signals in figs.3, 5) ;

(c) loading said specification data into a domain filter (see fig.7) so as to render those of the system units within one domain (see one of the states) responsive to certain control signals of distributor, and to render others of the system units responsive to said distributor (see the sending out of the massage in fig.4 [158]);

(d) repeating steps (b) [157] and (c) [158] for further specification data defining a different subset of said system units (see in case of higher priority in fig.4) ;

wherein step (c) is also responsive to said specification data for loading the domain filter so as to render those of the system units (routers) within the one domain responsive to addresses on said global address router originating from those of the system units within said one domain (see the control messages in corresponding states in fig.7) , and to render the system units within a first domain (see e.g. the event 8, coup message received only by active state router in fig.7) unresponsive to addresses on the global address router originating from at least some of those of the system units not within said first domain. For filtering inn claim 39, see filtering in col.5, lines 55-60).

18. As to claims 16-19, Li also taught broadcasting a transaction from one of said system units within said first domain via said global address router to all of said system

units, both within (see active router in event 8 I fig.7) and without said first domain (see event 9); and filtering a transaction at each of the system units such that those of the system units within said first domain are enabled to respond to the transaction (see Coup message only the active routers received the in col.14, line 1, col.15, lines 1-3), and others of the system units outside the first domain were disabled from responding to the transaction (see Coup message not received by other routers in other states in fig.7).

19. As to claim 28, Li also included shared address range (see col.6, lines 45-54).

20. As to claim 20, Li taught a system for a multiprocessor computer having a global address router (see virtual IP router in col.4, lines 32-44, col.8, lines 8-18), a global data router (see fig.1, data, control, address bus [15] [65] by the controller [22] see also fig2b data bus [130], see also IP router in virtual IP router, in col.4, lines 32-44, col.8, lines 8-18) , and a control-signal distributor for interconnecting a plurality of other ones of the system units, said computer also having a computer controller including at least :

a) means coupled to both of the global routers for accepting at least one processor unit for generating addresses within a predetermined global range (see fig.2b the routers and the host, see col.10, lines 60-65, col.15, lines 30-62, col.16, lines 45-49 for address range);

b) means coupled to the global routers for accepting at least one memory unit for

storing data at a set of addresses within said predetermined global range (see col.16, lines 45-49 for IP address stored in non volatile memory, see also the MAC address stored in ROM in col4, lines 26-32);

c) means coupled to the global routers for accepting at least one input/output adapter (see the multiport interface in col.5, lines 40-56) for generating and/or receiving a set of addresses within said predetermined global range;

d) means connected to at least one of a preceding means for generating control signals to a distributor(see the host with the virtual, router in fig.1, see also single processor embodiment in col.6, lines 1-8) , the control signals representing error conditions (see resign message) within a system unit, and for receiving control signals representing error conditions within other system units (see the broadcast of the resign messages);

e) means for filtering said control signals (see filtering control signals in col.5, lines 54-60) such that only those control signals from selectable ones of said other units can affect the operation of said system unit (see selected active routers in col.6, lines 58-64);

f) means connectible to said computer controller (see figs.4,5, see also fig.1 [controller)) for selecting the active routers) for selecting said ones of said other units.

21. As to claim 23-25, Li also included shared memory register (see many ways of memory storage in col.5, lines 35-39).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

22. Claims 7, 22, 26, 29, 30,31-33, 47 rejected under 35 U.S.C. 103(a) as being unpatentable over Li et al. (5,437,599) in view of Raab et al. (5,751,967) .

23. As to claims 7, 22, 26,47, limitations of parent claims have been discussed in previous paragraph, therefore not be repeated herein. Li disclosed a multiprocessor computer (see fig.2b) having hardware domains variable configurable by commands from an operator (see how the IP addresses programmed by the programmer col.15, lines 30-35, see also the MAC address programmed in the ROM in col.4, lines 27-32), the computer comprising:

A) plurality of separate system units (see routers) for performing sequences of transactions, each said system unit being individually physically removable (See the router as a piece of hardware in col.4, lines 10-14, and plugged into network in col.4, lines 25-28) and replaceable within the computer, and each including at least one of:

b) processor unit for generating addresses within a predetermined global range (see the group IP address range in col.6, lines 58-62, 8, lines 57-65, col.10, lines 60-65, see also the group MAC address range in col.15, lines 36-62);

c) a memory (see IP address in non-volatile memory in col.16, lines 40-50, see also the MAC address in ROM in col.4, lines 25-32) unit for storing data at a set of addresses within said predetermined global range;

d) an input/output adapter for generating and/or receiving a set of addresses within the predetermined global range (see the multiport communication interface of a router in fig.1, col.5, lines 27-52),

e) a global address router [22] [15] [65] coupled to said system unit for transferring addresses generated in any of system units to others of system units (see fig.1, data, control, address bus [15] [65] by the controller [22], see also virtual IP router in col.4, lines 32-44, col.8, lines 8-18);

f) a global data router [130] for transferring data from any of said system units to others of the system units (see fig.1, data, control, address bus [15] [65] by the controller [22] see also fig2b data bus [130], see also IP router in virtual IP router, in col.4, lines 32-44, col.8, lines 8-18);

g) a control-signal distributor for communicating (see CPU in col.5, lines 27-33, see also the single processor control in col.6, lines 1-8 for alternative embodiment) a plurality of control signals from any of the system units to others of said system units for affecting the operation of all of said system units in response to conditions in any system unit;

h) a domain configuration for electronically dividing said computer into a plurality of software-configurable hardware domains (see how the R1-R7 divided in groups in fig.2b, col.7, lines 30-61) each comprising an arbitrary subset of said system units

(routers) independently of any physical reconnection of system units within said computer (see how the active routers could d be defined into a group in col.7, lines 30-61);

i) a computer controller (see figs. 4-6) responsive to commands for specifying to the domain configuration which of said system units belong to each of the hardware domains (see how the router entered and left the group in col.8, lines 3-56) ;

j) a domain filter (see fig.7) coupled to all of said system units for electronically inhibiting at least some of said control signals originating in those of the system units within one of said domains from affecting certain of said system units outside said one domain (see the control messages only sent to certain routine in particular states) , wherein said domain filter (fig.7) is coupled to at least one of said global routers for inhibiting transactions on said one global router originating in those of said system units within one of the domains (virgin, learn, listen, speak, standby) from being received in certain of said system units (e.g. see Coup control signals only sent to routers of the Active state, see col.14, line 1, col.15, lines 1-3, see other events) outside the one domain (virgin, learn, listen, speak, standby) .

24. Li did not specifically showed the domain writable mask register as claimed . However, Raab disclosed a system concluding a member maskable register for domain (see col.10, lines 12-28) . It would have been obvious to one of ordinary skill in the art to use Raab in Li for including the retable mask register as claimed be cause the use of Raab could provide Li the ability to designate specific group of the routers, thereby

increasing the adaptability of the routers in a predefined set of group selection, and because Li did disclose a selection of the routines in based on corresponding configuration states (see fig.7), which was a suggestion of the need for providing means for designating a selectable group of routers in a given format (e.g. a maskable states, comparable states, or the like) , for doing so provide a motivating.

25. As to claims 29,30-33, Li also included portion of local address for requesting the global address (see the router's primary address and group address I col.10, lines 56-65).

26. Claims 13, 36, 51, 52, are rejected under 35 U.S.C. 103(a) as being unpatentable over Li et al. (5,437,599) in view of Hardwick et al. (5,550,816).

27. As to claims 13,36, 51,52, Li did not specifically show the cluster domain as. However, Hardwick disclosed defining a cluster [cluster port] (see fig.19 [cluster] , col.48, lines 42-63). It would have been obvious to one of ordinary skill in the art to use Hardwick in Li for including the cluster as clamed because the use of Hardwick could provide Li the capability to adapt to different system requirement, such as the specific cluster of eh system, therefore, increasing the system adaptability, and one of ordinary skill in the art should be able to recognize the selected groups of Li could be applicable as a cluster of domains as other entities could also be used to send packets from a host in one LAN to destinations outside of the host's LAN (see col.16, lines 54-62) in order to achieve the system connectivity.

28. Claims 8,9 , 48 , 49, 56 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. None of the prior art of record further teaches the combined features of the plurality of cluster registers each identifying which of said system units belong to a domain cluster, and responsive to a current one of said transactions, the connection for transmitting a valid-transaction signal to each of said system units in the common cluster for any of transactions originating from

one of the system units belonging to the domain cluster.

29. Claims 14, 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. None of the prior art of record further teaches the combined features of the receiving third specification data defining a shared range of addresses physically present within one of the domains, and accessible to other domains within said cluster of domains; the loading the third data into the domain filter so as to render those of the system units within said cluster of domains responsive to addresses on the global address router originating from those of the system units

within the cluster of domains but only within the shared range.

30. Claim 27 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the

base claim and any intervening claims. None of the prior art of record further teaches the combined features of the plurality of said hardware domains into a domain cluster comprising the arbitrary subset of said domains independently of any physical reconnection of system units , the writable shared-memory mask register which of plurality of system units belong to the same domain cluster as one system unit, The comparator further coupled to the domain mask register for producing the inhibit when a source identifier indicated each address originated at certain of system units outside the same domain cluster.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a) Ernst (5,572,674) is cited for the router domains (see fig.1, see also the virtual control unit in col.12, lines 37-65).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dan Pan whose telephone number is 703 305 9696, or the new number 571 272 4172. The examiner can normally be reached on M-F from 8:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chan, can be reached on 703 305 9712, or the new number 571 272 4162. The fax phone number for the organization where this application or proceeding is assigned is 703 306 5404.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

21 Century Strategic Plan

DANIEL H. PAN
PRIMARY EXAMINER
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